

Lyme, NH – Thetford, VT 14460

E. Thetford Road Bridge Rehabilitation

Public Informational Meeting



About the Bridge

- Thru-Truss Bridge Built in 1937
- Eligible for Historic Registry
- Bridge consists of two 230' spans
- Bridge roadway width is 21' curb – curb
- Bridge is on NHDOT State's Red List
- 2014 Bridge Priority Number #63
- 15 ton load posting and single lane of traffic



Thefford, Vermont



Looking Easterly toward NH



Bridge Placard



Lyme, New Hampshire



Looking Westerly toward Thetford, Vermont



Lyme, New Hampshire



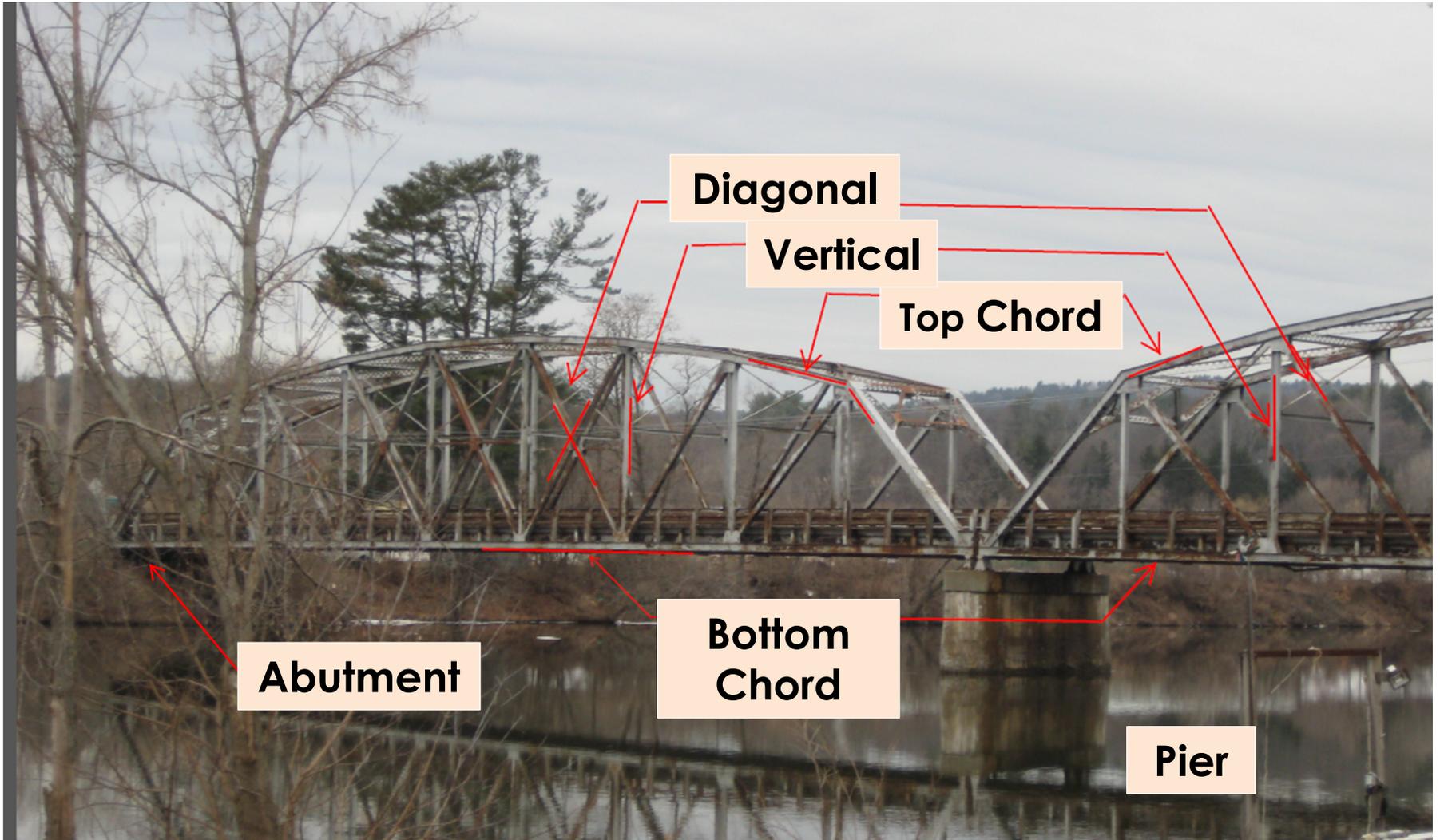
NE Quadrant



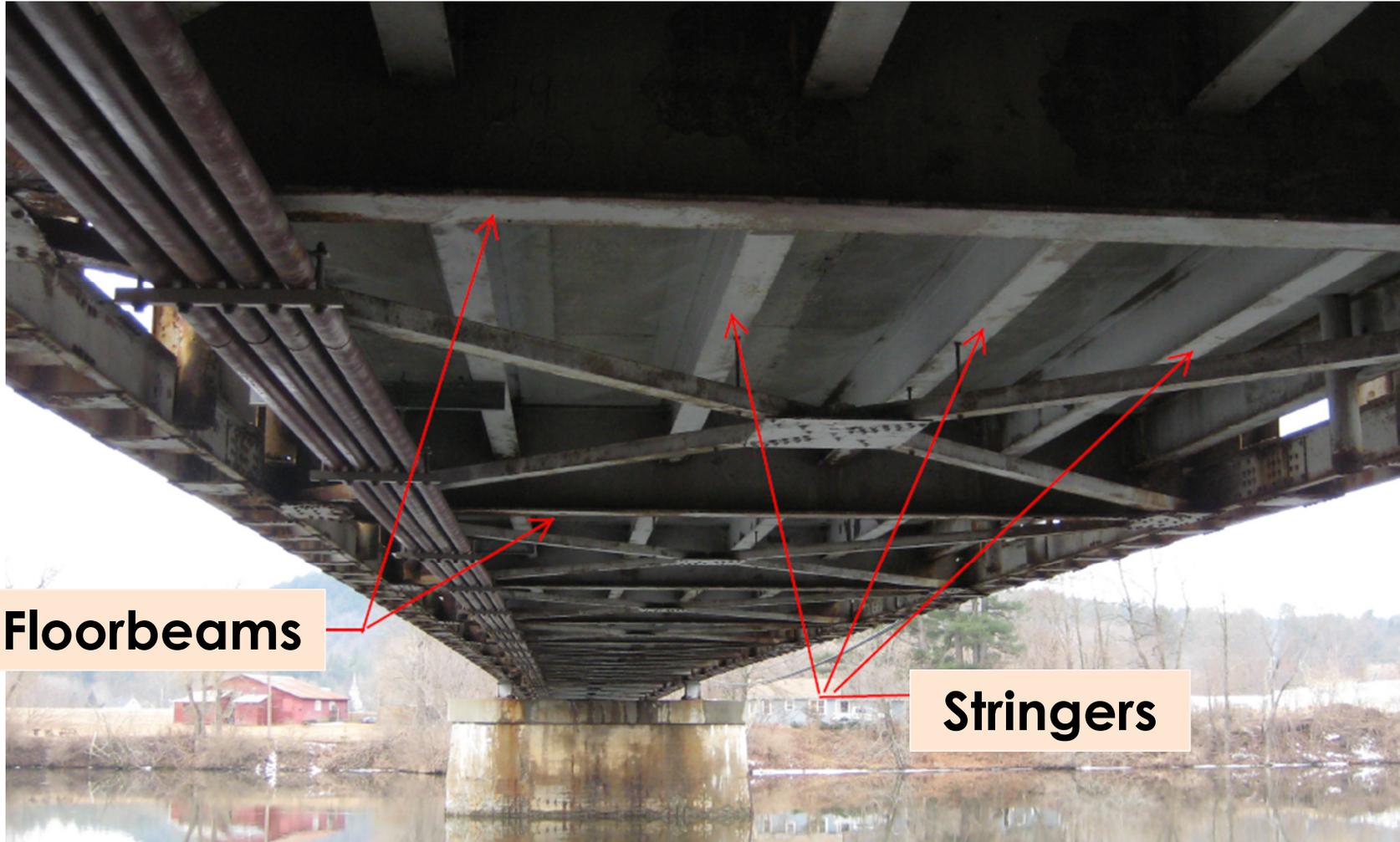
Looking Northerly



Truss Bridge Nomenclature



Truss Bridge Nomenclature



Floorbeams

Stringers

Tasks Completed to Date

- In-depth structural inspection of all bridge components
- Underwater inspection of pier
- Concrete sampling and testing of pier
- Load rating analysis



Inspection Photos



Steel Bridge Rail and Curb Deterioration



Stringer Deterioration



Stringer Deterioration



Span 2 Stringer 6 East Face of FB0

Stringer Deterioration



Span 1 Stringer 1 West face of FB0

Stringer Deterioration



Span 1 Stringer 6 East Face of FB0

Vermont Abutment



SW Quadrant



New Hampshire Abutment



Pier – East Elevation



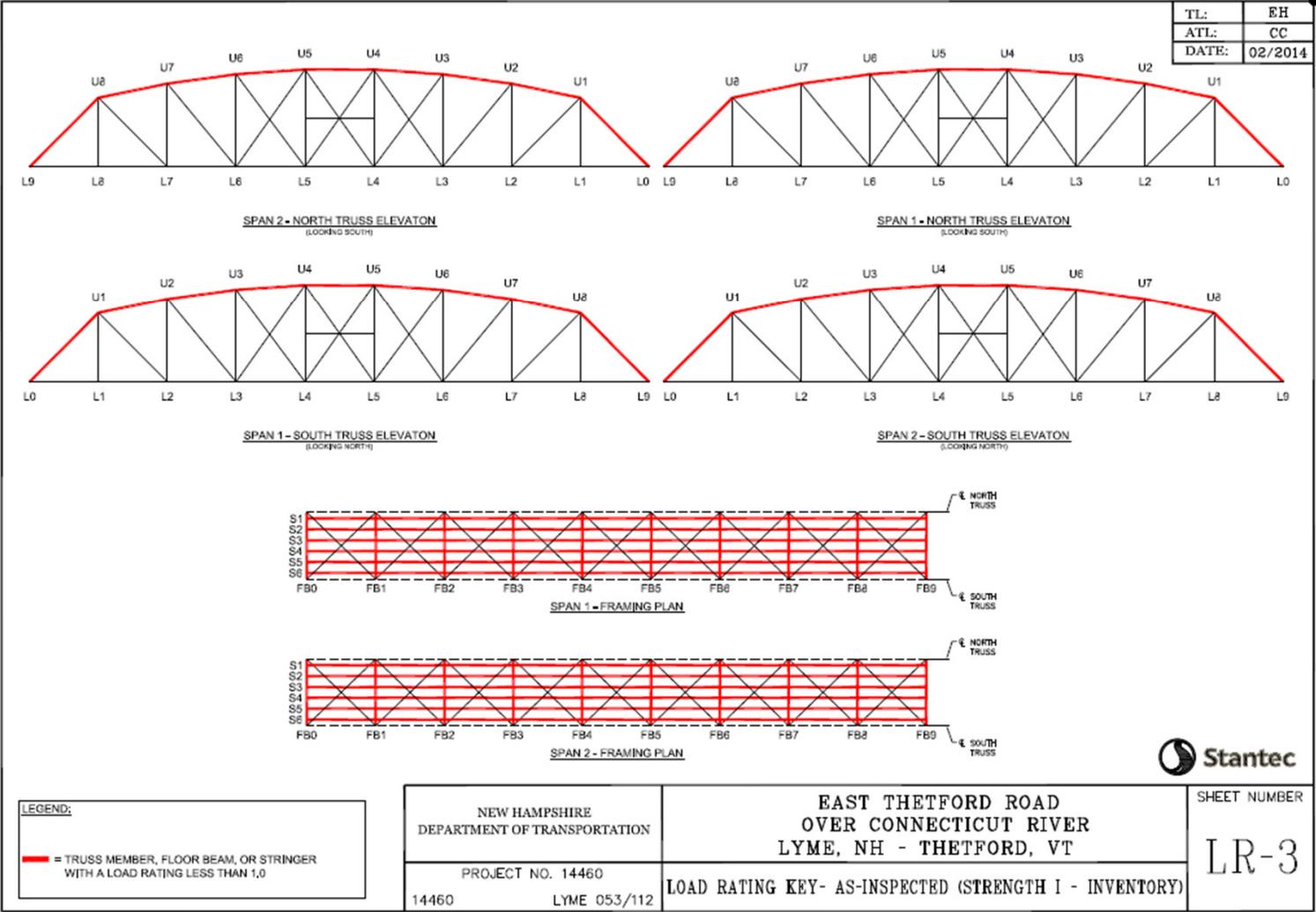
Pier – at Waterline



Pier – Below Waterline



Load Rating Analysis



Anticipated Rehabilitation Effort

- Replace exterior stringers
- Replace concrete deck and steel curb
- Replace bridge rail
- Paint all steel truss components
- Repair the abutments
- Repair or replace the pier



Pier - Options Being Considered

- Encapsulate the pier stem with new concrete (\$600 k)
- Rebuild the pier in-kind (\$1.2 m)
- Construct new two column drilled shaft pier



Pier - Options

two column drilled shaft pier (\$1.1 m)

Existing Truss

EXISTING TRUSS

New Pier Cap

PROPOSED PIER CAP

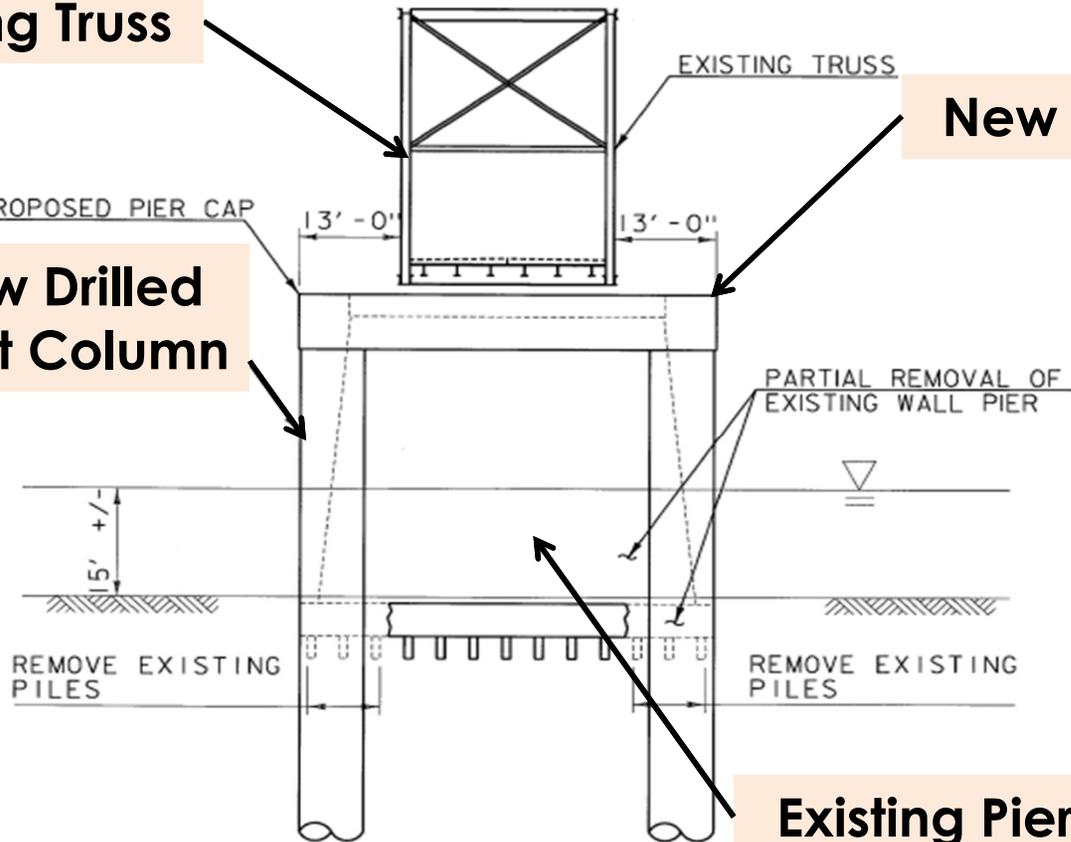
New Drilled Shaft Column

PARTIAL REMOVAL OF EXISTING WALL PIER

REMOVE EXISTING PILES

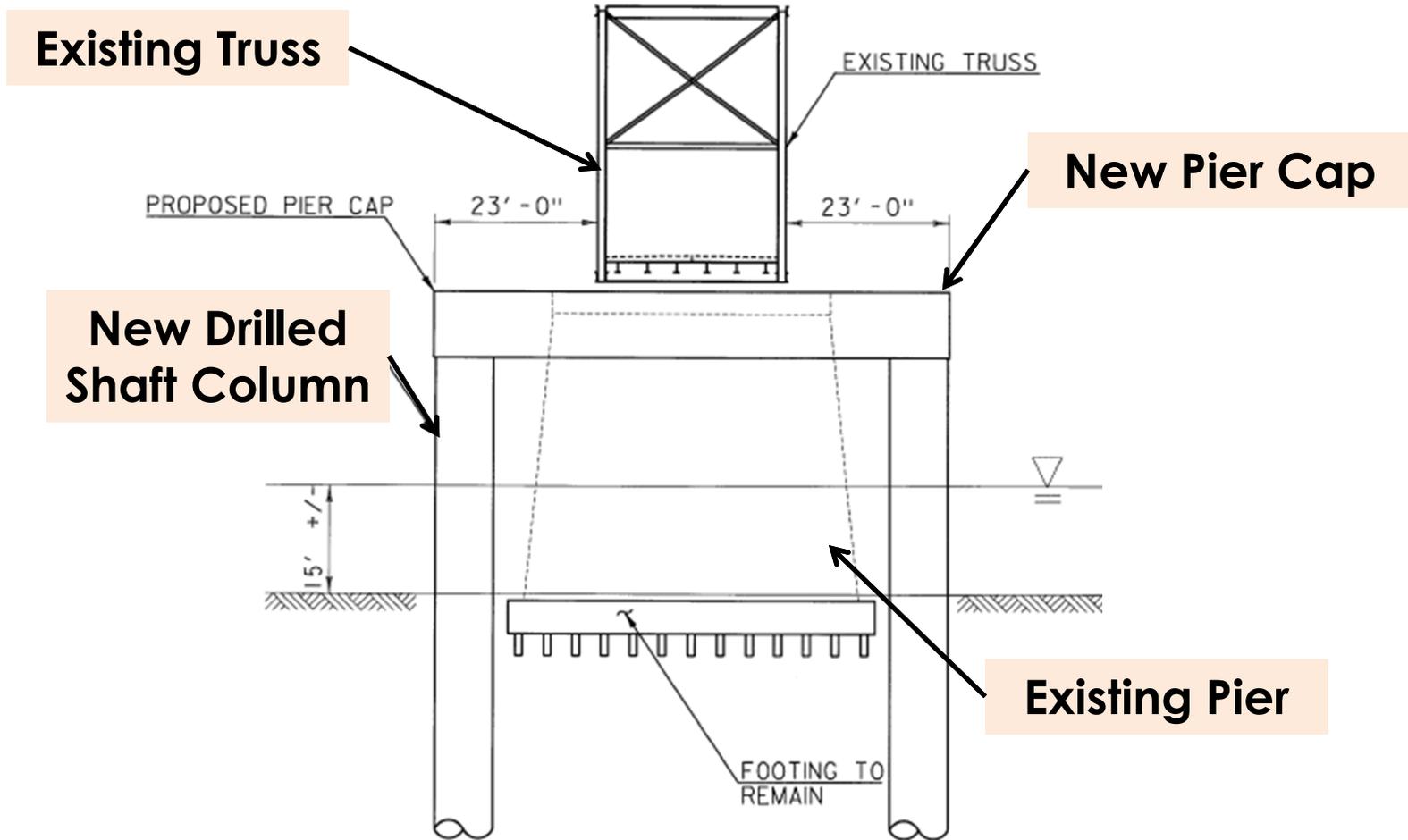
REMOVE EXISTING PILES

Existing Pier



Pier - Options

two column drilled shaft pier (\$985 k)

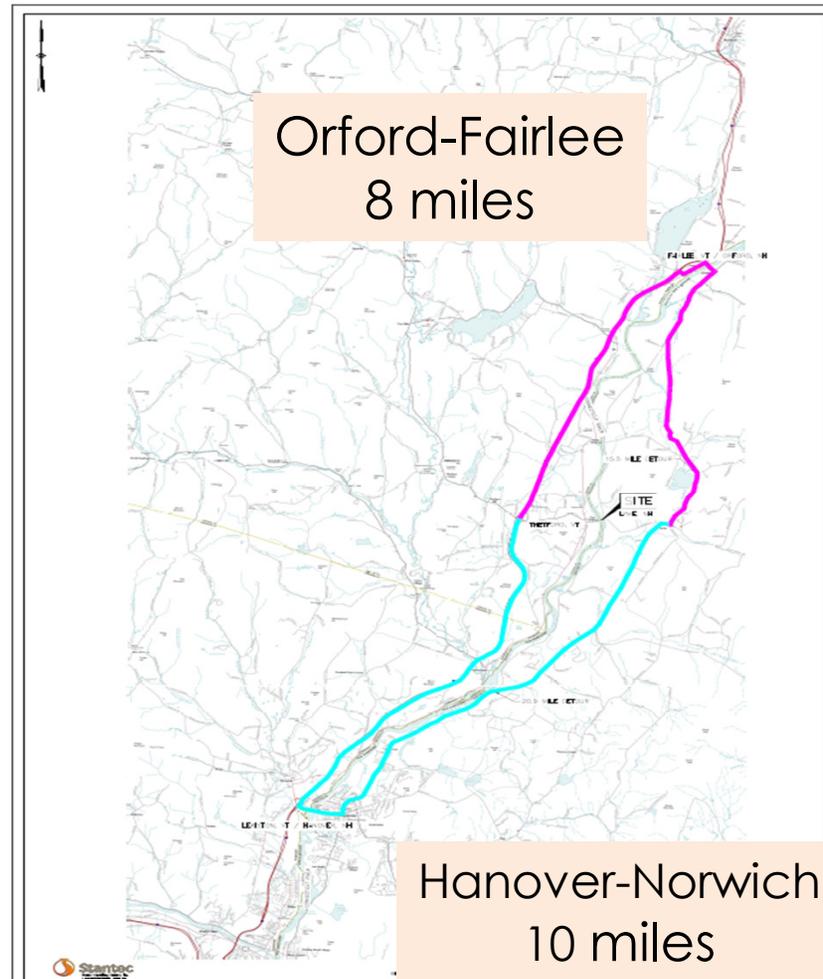


Construction Summary

- The project will rehabilitate the historic bridge to carry Legal Loads
- Minor approach roadway work
- Two construction seasons anticipated
- First season complete structural repairs
- Second season paint steel truss components
- The bridge will be closed during construction



Detour Routes



Next Steps

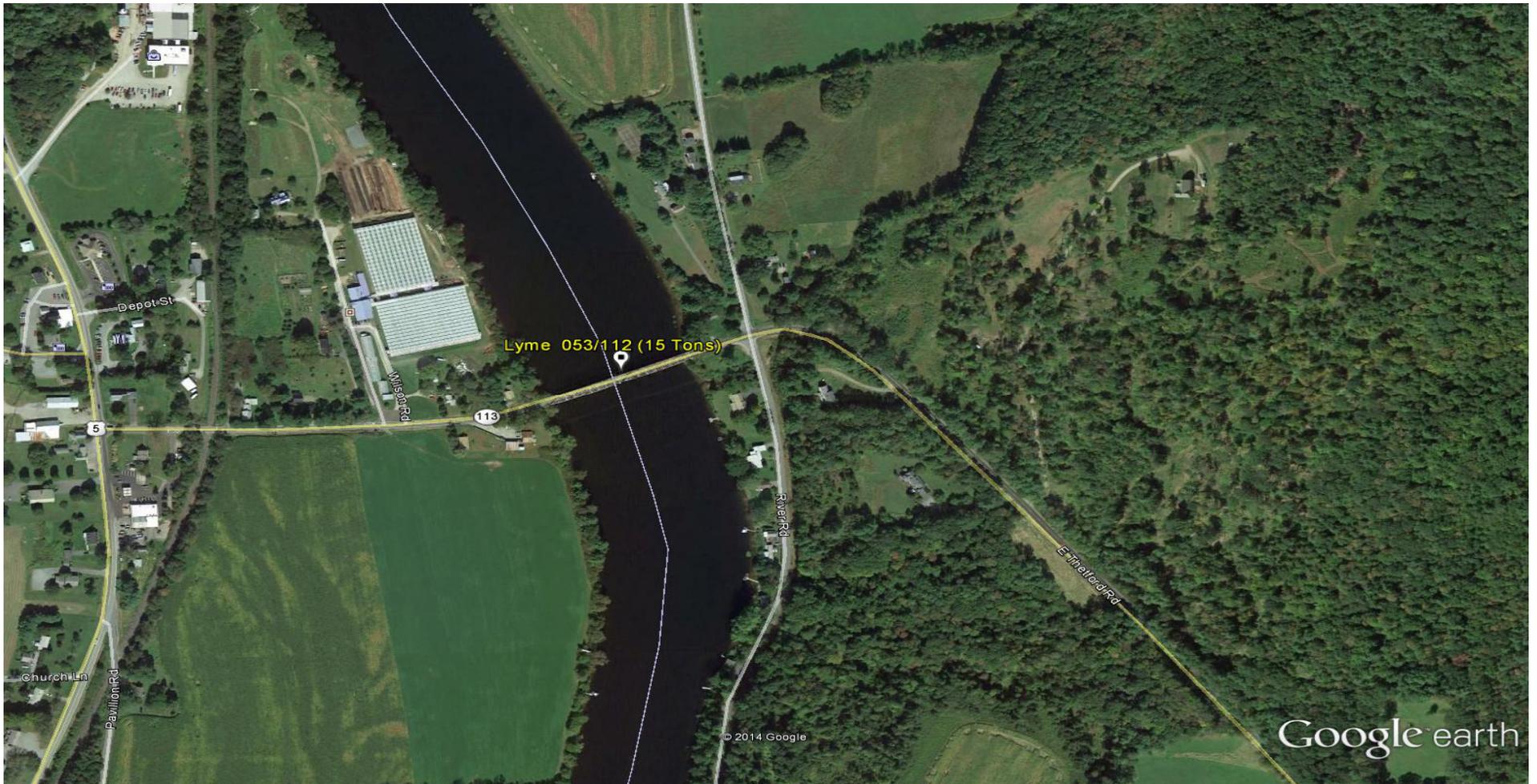
- Present to Cultural and Natural Resource Agencies to get their input and comments
- Develop and Evaluate Alternatives
- Review constructability and access to site
- Public Informational Meeting in Thetford, VT
- Complete NEPA process
- Develop Preliminary Plans
- Develop Contract Plans and Documents



Natural Resources

Connecticut River, NH Designated River

Dwarf Wedge Mussel, Federally Endangered



Cultural Resources

1937 2-Span Parker Truss

1 of only 3 remaining in NH



Natural and Cultural Resources Theftford, Vermont



Natural and Cultural Resources Lyme, New Hampshire



Next Steps from Cultural and Natural Resources

- Need to investigate if additional Resources exist in the Project Area (Please bring any concerns to our attention).
- Need to investigate if any Archeological Resources are in the Project Area including Staging areas.
- Section 106 of the National Historic Preservation act offers those that possess a direct interest in historic resources, including town officials and Historical Societies, an opportunity to become more involved in an advisory role during project development as “Consulting Parties”. Those interested would need to indicate so in writing to the Federal Highway Administration.



Permitting and Approvals

- NEPA – Categorical Exclusion
- NHDES Wetland Permit
- NHDES Shoreland Notification
- Vermont Stream Alteration
- Army Corps PGP



Next Steps and Schedule

- Interim repairs by NH Bridge Maintenance Fall 2014 to remove Alternating One-Way
- Rehabilitation starts Spring of 2022 and ends Fall of 2023
- Estimated construction cost \$4.5 m



Your Input is Needed

- River Usage
- Emergency Response Provisions (mutual aid agreements)
- Other Concerns During Bridge Closure



Questions ?



East Thetford Road Bridge

